

POLAND / Organic Chemistry--Synthetic Organic  
Chemistry

G-2

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract:  $\text{CH}_3\text{CH}(\text{NO}_2)\text{CH}_2\text{OH}$  (X). The reaction of IX with  $\text{RCH}_2\text{NO}_2$  leads to the synthesis of the HC of VII. 0.1 mol III is treated with 0.15 mol IV, 0.5 gm  $\text{NaHCO}_3$ , and 0.1 mol II; at the termination of the exothermic reaction the solution is heated for 3 hrs at  $60-65^\circ$  and the resinous mass is washed with water; I are obtained (the product, yield in %, mp in  $^\circ\text{C}$  (from alc), and the mp in  $^\circ\text{C}$  of the hydrochloride (HC) are listed in that order): Ia,  $\sim 30$ , 50-51, 182 (decomp); b, 55, 59-60, 187 (decomp); c, 60, 69-70, 179 (decomp). 2 gms of I in 200 ml 80% alcohol are treated with 10 ml conc HCl, the solution is heated to boiling, and the solvent is distilled off, the last part of

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POLAND / Organic Chemistry--Synthetic Organic  
Chemistry

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Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: the distillation being carried out under vacuum; the HC of V is obtained. One gm of the HC of V in 15 ml water is treated with a calculated amount of NaHCO<sub>3</sub>, and V is isolated (the product, mp in °C (from alc), and the mp in °C (from 3:1 alc-acetone) of the HC and of the dibenzoyl derivative (from aqueous alc) are listed in that order): a, 68-70, 169(decomp); 106-107; b, 77-79, 170 (decomp), 101-102; c, 79-81, 167 (decomp), 140-142. One gm of V is treated with a calculated amount of 2% VI and then with an excess of alcoholic HCl at 0°, the solvent is distilled off under vacuum in the cold, and the HC of VII is isolated (the product and the mp in °C (decomp) are given): VIIa, 148; VIIb, 160;

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POLAND / Organic Chemistry--Synthetic Organic  
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Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: VIIc, 162. 0.5 gm of the HC of VII is treated with a small quantity of water and a calculated amount of  $\text{NaHCO}_3$ , is added; VIII is separated (crystallization from ether) (the product and mp in  $^{\circ}\text{C}$  (decomp) are given): VIIIA, 61-63; b, 95-97; c, 97-99. The action of 1 ml conc HCl on 0.1 gm VIII liberates  $\text{NO}_2$ ; evaporation to dryness yields the HC of VIII. 5 mmols VII in 50% alc are treated with 15 mmols IV, the solution is made alkaline with  $\text{NaHCO}_3$ , and allowed to stand a few days; I is obtained. 0.03 mol IIIa or IIIb is treated with 2 ml  $\text{CH}_3\text{OH}$  or dioxane, 0.03 mol II is added, and the solution is allowed to stand a few days at  $-20^{\circ}$ ; Vb or Vc is

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POLAND / Organic Chemistry--Synthetic Organic  
Chemistry

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Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 27503

Abstract: obtained, yield 80-90%. 0.01 mol X in  $\text{CH}_3\text{OH}$  is treated with a calculated amount of IX and the solution is allowed to stand in the cold for a few hours; Va is obtained, yield ~200 [sic]. 0.05 mol IX and 0.05 mol nitroparaffin in 5 ml dioxane are allowed to stand for several hrs at ~200, the solvent is evaporated, the residue is dissolved in acetone, and alcoholic HCl is added; the HC of VII is obtained in yields of ~80-85%.  
-- V. Skorodumov

Card 6/6

URBANSKI, T. ; PIOTROWSKI, A.,

On Aliphatic Nitrocompounds, Part XXXVII by T. URBANSKI and A. PIOTROWSKI,  
Page 455, Przemysl Chemiczny, No. 8, 1957.

URBANSKI, T.

J. Alkiewicz, Z. Eckstein, H. Halweg, P. Krakowka, T. URBANSKI: "Fungistatic Activity of Some Hydroxamic Acids," Nature, Vol. 180, No. 4596, (London) 30 November 1957, pp. 1204-1205. Published from the Department of Dermatology, Municipal Hospital No. 1, Poznan; Department of Chemistry, Institute of Technology, Warsaw; and, Laboratory of Mycology, Institute of Tuberculosis, Warsaw.

URBANSKI, TADEUSZ.

TECHNOLOGY

URBANSKI, TADEUSZ. Chemie a technologie vybusin. Prel. Zdenek Dolezel a Lusan  
Jakes. Praha, Statni nakl. technicke literatury. Vol. 2, 1958. 285 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

Distr: 4E2c(j)/4E3d

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V Intramolecular hydrogen bonding in *o*-nitroaniline. T. Urbanski and U. Dabrowska (Polish Acad. Sci., Warsaw). *Chem. & Ind. (London)* 1958, 1208. The infrared absorption spectra of the 3 isomeric  $\text{NO}_2\text{C}_6\text{H}_4\text{NH}_2$  (I) in 0.06%  $\text{CCl}_4$  soln. in the frequency ranges 2, 5-4  $\mu$  (N-H stretching) and 7.0-8.0  $\mu$  ( $\text{NO}_2$  sym. stretching vibrations) were examined with a single-beam spectrophotometer with NaCl prisms. It has previously been shown that in aliphatic nitro compounds the H bonds reduce both frequencies of the nitro group vibrations. The frequencies for the 3 isomeric I were: (2 N-H, and  $\text{NO}_2$  sym. frequencies in  $\text{cm}^{-1}$  given); *o*-, 3510, 3390; 1350; *m*-, 3510, 3450; 1350; *p*-, 3510, 3450; 1340. Since the frequencies of the N-H stretching vibrations agree with those reported and those of the nitro group, sym. vibrations, with data for a free, unbonded nitro group, there is no evidence of a H bond between the amino and nitro groups of *o*-I. Blanche B. White

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Distr: 4E2c(j)/4E3d

Stereochemistry of some 1,5-diazacyclooctane derivatives. R. Kolinski, H. Piotrowska, and T. Urbanski (Polish Acad. Sci., Warsaw). *J. Chem. Soc.* 1958, 2015-22; cf. *C.A.* 51, 14718a. --  $\text{EtC}(\text{CH}_2\text{OH})(\text{NO})\text{CH}_2\text{OH}$  (16 g.) and 34 ml. 25% aq.  $\text{NH}_3$  kept 1 hr. on the steam bath, the solid sepd., and dissolved in alc.  $\text{HCl}$  gave the less-sol. *trans*-3,7-diethyl-3,7-dinitro-1,5-diazacyclooctane- $\text{HCl}$ , m. 172-3° (decompn.) and 0.07 g. of the more-sol. *cis* hydrochloride (I), m. 109-71° (decompn.). I in  $\text{H}_2\text{O}$  neutralized with aq.  $\text{NaOH}$  gave the base, m. 94-5°. I (0.2 g.) in aq.  $\text{HCl}$  and  $\text{NaNO}_2$  gave 0.1 g. *N*-nitroso compd., m. 130-40° ( $\text{EtOH}$ ). The stereochemistry of these compounds is discussed.

Harry L. Yale

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2-MAY  
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*[Handwritten signature]*

Distr: 4E2c(j)

Isomerization of nitroparaffins. T. Urbanski (Inst. Technol., Warsaw). *Tetrahedron* 2, 240-241 (1966), C.A. 46, 7944c. In the presence of basic catalysts primary nitroparaffins are isomerized under the influence of  $\text{Ac}_2\text{O}$  or  $\text{H}_2\text{C:CO}$  into hydroxamic acids. Practical applications of this isomerism were investigated. Concd.  $\text{H}_2\text{SO}_4$  (3.5 g.) stirred at  $100^\circ$  with portionwise addn. of 2 g. 1,2-dinitroethane (I) (cf. Levy, *et al.*, C.A. 41, 2388z) and the mixt. cooled to  $5-10^\circ$ , dild. with 8-10 ml. alc. and the product washed with alc. and  $\text{Et}_2\text{O}$  gave 79% ( $\text{HONH}_2$ ),  $\text{H}_2\text{SO}_4$  [cf. Polish 40,008 (1956)].  $\text{AcOH}$  (10 g.) and 10 g. I added dropwise in 20 min. to 35 g. concd.  $\text{H}_2\text{SO}_4$  at  $120-5^\circ$  (bath temp.,  $120^\circ$ ) and the mixt. treated dropwise with 12-5 g. cyclohexanone in 24 min. at  $120^\circ$ , excess  $\text{AcOH}$  evapd. and the residue neutralized below  $50^\circ$  with cold aq. 25%  $\text{NH}_4\text{OH}$ , the org. layer taken up in  $\text{Et}_2\text{O}$  and the dried (anhyd.  $\text{Na}_2\text{SO}_4$ ) ext. evapd. yielded 72% caprolactam [cf. Polish 40,009 (1956)]. C. R. Addinall

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2-May

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URBANSKI, T.

New unsymmetrical isomeric derivatives of tetranitro-  
azoxybenzene? T. Urbanski and J. Urbanski (Politech.  
Warsaw). *Bull. acad. polon. sci., Ser. sci., Chim. glob. et  
biophys.* 6, 305-6 (1958) (in English); cf. preceding abstr.  
4-Hydroxy-4'-methoxy-3,3',5,5'-trinitroazoxybenzene treated  
with tosyl chloride, nitrobenzene, and diethylaniline and  
the product nitrated at 80° with 2:1 HNO<sub>3</sub>-H<sub>2</sub>PO<sub>4</sub> gave 4-  
chloro-4'-methoxy-3,3',5,5'-tetranitroazoxybenzene, m.  
185-8°, which hydrolyzed with aq. HBr in AcOH at 110°  
afforded 4-chloro-4'-hydroxy-3,3',5,5'-tetranitroazoxy-  
benzene (I), m. 198-201°. I was treated with MeOH,  
NaOH, and AcOEt and the product treated with tosyl  
chloride, nitrobenzene, and diethylaniline to give 4-meth-  
oxy-4'-chloro-3,3',5,5'-tetranitroazoxybenzene, m. 203-4°,  
which hydrolyzed with HBr in AcOH at 120° gave 4-hy-  
droxy-4'-chloro-3,3',5,5'-tetranitroazoxybenzene, m. 214-  
17°. Existence of these different isomers is a proof of the  
Angeli theory of the asym. azoxy group. The 4'-MeO  
group (in ring adjacent to azoxy group) is more reactive  
than the 4-MeO group. J. Stecki

Distr: 4E2c(j)/4E3d

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URBANSKI, T.

Distr: 4E2c(1)/4E3d

Products of nitration of 4,4'-bis(dimethylamino)azoxybenzene. T. Urbanski and J. Urbanski (Politech. War-saw). *Bull. Acad. Polon. sci., Ser. sci., Chim. ind. et appl.* 6, 307-8 (1968) (in English); cf. preceding abstr. 4,4'-Bis(dimethylamino)azoxybenzene was nitrated to 4,4'-bis(methylnitroamino)-3,3',5,5'-tetranitroazoxybenzene (I), m. 208-9° (decompn.), also prep'd. by the following sequence of reactions. Tetranitroazoxyanisole (cf. 2nd preceding abstr.) (2,2',6,6'-tetranitro-4,4'-azoxybisanisole) was treated with HBr and AcOH to give 4,4'-dihydroxy-3,3',5,5'-tetranitroazoxybenzene, m. 186-7°, which treated with tosyl chloride, nitrobenzene, and diethylaniline afforded the 4,4'-dichloro deriv., m. 226-8°. This was treated with MeNH<sub>2</sub> in EtOH to give the 4,4'-bis(dimethylamino) deriv., m. 260-1°, which nitrated afforded I. On Cl for MeNH group exchange the 4-Cl-4'-MeNH deriv., m. 206-8°, was produced. Owing to greater Cl mobility, the MeNH group was substituted into the C<sub>6</sub>H<sub>5</sub> ring attached to azoxy group. J. Stecki

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2 May  
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J. Stecki

URBANSKI, TADEUSZ

Distr: 4E2c(j)/4E3d  
 Aliphatic nitrocompounds. XXXV. Infrared absorption spectra of amino-nitro compounds derived from nitro-paraffins. Tadeusz Urbanowski (Polish, Warsaw). *Kochi Chem.* 32, 211-24 (1958) (English summary 251-4); cf. *C.A.* 52, 8045h, 0971i. — Infrared absorption spectra were examd. of tetrahydro-5-ethyl-3-nitro-1,3-oxazine-HCl (I), its 3-(2-ethyl-2-nitro-1-hydroxypropyl) deriv. (II), 6,7-diethyl-3,7-dinitro-3-hydroxymethyl-1-oxa-3-azacyclooctane (III), bis(2-ethyl-2-nitro-1-hydroxypropyl)ammonium chloride (IV), bis(2-methyl-2-nitropropyl)ammonium chloride (V), and morpholine (VI). All the compds. show strong bands of the NH-group stretching vibrations at  $3\ \mu$ , and deformation vibrations  $\nu$  (in the  $6\text{-}\mu$  region). There is no free NH group band in the spectrum of IV and V. This confirms the previous hypothesis (*C.A.* 51, 12650d) that there exist H bonds between NH and  $\text{NO}_2$  groups. The C-N stretching  $\nu$  seem to lie at 1209-1100 (I, II, IV), and 1047-1031 and 1224-1215  $\text{cm}^{-1}$  (all compds.). It is suggested that strong bands 3448 and 3509  $\text{cm}^{-1}$  in II and III, and 6807, 7143 and 6803  $\text{cm}^{-1}$  in II, III, and IV, resp. are due to OH groups, and at 1016  $\text{cm}^{-1}$  to C-O stretching or O-H deformation. The C-O-C stretching  $\nu$  of I, II, and III is found to lie at 1111  $\text{cm}^{-1}$ , and that corresponding to cyclic ether bond at 1042, 1053, and 1034  $\text{cm}^{-1}$ , resp., with overtone  $\nu$  at 4000, 3846, and 3923  $\text{cm}^{-1}$ , resp. This was proved by examn. of morpholine, showing bands at 1099, 1042, and 4000  $\text{cm}^{-1}$ , and confirms the structure of VI and III derivs. The values of  $\nu$  found in the  $6.4\text{-}\mu$  region correspond to free  $\text{NO}_2$  group, or that bonded with only one OH or NH group (IV). They are little affected by H bonds as in nitroalk. (loc. cit.). The stretching  $\nu$  between C and N of the  $\text{NO}_2$  group may be assigned to 1087 (I), 1075 (II and IV), 1073 (III), and 1058  $\text{cm}^{-1}$  (in IV), in agreement with prevl. results. A. Kreslewski

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Distr: 4E2c(j)

Nitration with dilute nitric acid. Tadeusz Urbański (Politech., Warsaw). *Roczniki Chem.* 32-415-17(1958) (English summary).—8-Hydroxyquinoline<sup>1</sup> (I) can be nitrated with 25% HNO<sub>3</sub> to yield 6,7-dinitro deriv. (II) of I (C.A. 48. 4546k). The same product can be obtained with 25% HNO<sub>3</sub> on 8-hydroxyquinoline-5-sulfonic acid (III) or 8-hydroxy-5-(hydroxyamino)quinoline-N-sulfonic acid (IV). The present expts. show that I and IV may be nitrated with 15, 10, or even 7.5% HNO<sub>3</sub>. The rate of nitration decreased with lowering of concn. The yield of II was 67-87%. It has so far been noticed that prior to formation of II, NO<sub>2</sub> is evolved. This suggests that NO<sub>2</sub> is an essential intermediate (similar to nitration of phenols). A. Kreglewski.

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URBANSKI, T.

"The chemotherapy of tuberculosis"

p. 225 (Kosmos, Seria B; Przyroda Nieożywiona, Journal on natural sciences with the exception of biology issued by the Copernicus Society of Polish Naturalists, Vol. 4, no. 3, 1958, Warsaw, Poland)

Monthly Index of East European Accessions (EEAI) LC, Vol. 8, No. 1, Jan. 59.

Urbanski, T.

POLAND/Organic Chemistry. Organic Synthesis.

G-2

Abs Jour : Ref Zhur-Khimiya, No 9, 1959, 31392

Author : Szyc-Lewanska, K., Urbanski, T.

Inst : AS Poland.

Title : Contribution to Chemistry of Cyclonite. On  
Nitration of Hexamethylenetriperoxidediamine  
(HMTDA).

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chin.,  
geol. et geogr., 1958, 6, No 3, 165-167,  
XIII.

Abstract : With a view to confirm the assumption  
concerning the formation of trimethylene-  
trinitramine (cyclonite) (I) in the nitro-  
lysis of compounds containing the  $\text{CH}_2\text{N}$  group,  
a similar reaction was carried out with hexa-

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POLAND/Organic Chemistry. Organic Synthesis.

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Abs Jour : Ref Zhur-Khiniya, No 9, 1959, 31392

methylenetriperoxidedianine (II). CH<sub>2</sub>O (III) and HCOOH (IV) together with I were revealed in the products of nitrolysis of II, and the absence of O<sub>2</sub> was proved. Accordingly, the summary reaction equation must be as follows:  $II + NH_4NO_3 (V) + 2NO_2 \rightarrow I + III + IV + 2H_2O$ . 2.5 g of II and 4.2 g of V are added in small amounts to the solution of 3.5 g of II in 25 g of HNO<sub>3</sub> (d = 1.5), the mixture is allowed to stand (several minutes at 80-82° and 12 hours at 0°), and I is filtered off, yield of I 26 percent, melt. p. 203-205°. III and IV are separated from the filtrate as the 2,4-dinitrophenylhydrazones and benzylthiouronic salt respectively.

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POLAND/Organic Chemistry. Organic Synthesis.

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Abs Jour : Ref Zhur-Khiniya, No 9, 1959, 31392

The absence of  $O_2$  in the separating gases  
is determined by the negative reaction with  
safranin. S. Gurvich

Card : 3/3

POLAND/Chemical Technology. Chemical Products  
and Their Applications. Pesticides.

H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20704

Author : Eckstein, Z., Halweg, H., Krakowka, P.,  
Urbanski, T.

Inst : AS Poland.

Title : The Fungistatic Activity of 3,4-Dichloro-  
phenoxyacethydroxamic Acid on Pathogenic  
Fungi in Vitro.

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim.  
geol. et geogr., 1958, 6, No 4, 235-238,  
XVIII

Abstract : Tests of the fungicidal activity of hydroxa-  
mic acids by the method of "cylinders" with  
Candida albicans 102, Cryptococcus neoform-

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POLAND/Chemical Technology. Chemical Products  
and Their Applications. Pesticides.

H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20704

mans 38, *Trichophyton gypseum* 768, *T. rubrum* 3346, *T. violaceum* 3905, *T. schoenleinii* III 1 F and *Penicillium* 45 showed that 2,4- and 2,5-dichlorophenoxy- and 2-methyl-4-chlorophenoxyacethydroxamic acids inhibit the growth of all tested species except *C. albicans*; alpha and beta-naphtoxyacethydroxamic acids suppressed the growth of fungi of the *Trichophyton* family; 5-nitro-2,4-dichlorophenoxyacethydroxamic acid is active against the latter three species; 2,4,6-trichlorophenoxyacethydroxamic acid is non-active. 3,4-dichlorophenoxyacethydroxamic acid (I) in concentrations of 0.005-0.25 ml/g suppresses the growth of

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POLAND/CH

POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23268

G

Author : Urbanski, T.; Tarantowicz, W.

Inst : Academy of Sciences, Poland

Title : On the Preparation and Some Properties of Butyne-2-Diol-1,4-Dinitrate.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 5, 289-292, XXIII.

Abstract:  $\text{NO}_2\text{OCH}_2\text{C CCH}_2\text{ONO}_2$  (II) was synthesized by nitrating  $\text{OHCH}_2\text{C CCH}_2\text{OH}$  (I) and converted into I acetate (III). 20 g of I is added to 83 ml of the mixture (2 : 3) of  $\text{HNO}_3$  ( $d = 1.50$ ) and concentrated  $\text{H}_2\text{SO}_4$  at  $18-22^\circ$ ; 20 min. later it is cooled to  $5^\circ$  and poured into 750 g of ice, and II is extracted with ether, yield 70-75%,  $n_{\text{D}}^{25} = 1.4732$ ,  $d_{20} = 1.408$ . 6 g of

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POLAND / Organic Chemistry. Synthesis.

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Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23268

Abstract: Zn dust is added to 2 g of II in 25 ml of  $(\text{CH}_3\text{CO})_2\text{O}$  in the duration of 45-60 min. letting dry HCl to pass through, all is poured out on ice, and III is obtained, melt. p.  $30^\circ$  (from ether). II causes a strong headache, and it explodes if stricken or if it gets on a hot surface ( $245-380^\circ$ ); as far as the force of explosion is concerned, III does not differ from nitrates containing the same relative amount of  $\text{O}_2$ . -- V. Tynyankina

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Country : POLAND  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15339  
 Author : Urbanski, T.; Urbanski, J.  
 Institut. : Polish AS  
 Title : On Products of Nitration of p,p'-Azoxyanisole  
 Orig Pub. : Bull. Acad. polon. sci. Ser. sci. chim., geol.  
 et geogr., 1958, 6, No 5, 299-303, XXIII  
 Abstract : Nitration of p,p'-azoxyanisole (I), m.p. 116°,  
 was studied. A mixture of 40% HNO<sub>3</sub>, 55% CH<sub>3</sub>COOH  
 and 5% water nitrates I at 20° to 3,3'-dinitro-  
 azoxy-4,4'-anisole (II), yield 60%, m.p. 210-  
 212°; mixture of 64% HNO<sub>3</sub>, 34% CH<sub>3</sub>COOH and 20%  
 water at 85° nitrates I to 3,5,3'-trinitroazo-  
 xy-4,4'-anisole (III), yield 60%, m.p. 179-  
 180°. Mixture of HNO<sub>3</sub> (d 1.50) and 85% H<sub>3</sub>PO<sub>4</sub>  
 (1:1) at 30° nitrates I to III, yield 80%, and  
 at 85° to 3,5,3',5'-tetranitroazoxy-4,4'-anisole

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...ing - is obtained  
 with structure of III as  
 structure of the

POLAND / Organic Chemistry. Synthesis.

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Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23335

Author : Urbanski, T.; Urbanski, J.  
Inst : Academy of Sciences, Poland  
Title : On Some New Unsymmetrical Isomeric Derivatives of  
Tetranitroazoxybenzene.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol. et  
geogr., 1958, 6, No 5, 305-306, XXIV

Abstract: The preparation of two pairs of isomeric asymmetric  
derivatives of 3,5,3',5'-tetranitroazoxybenzene  
 $RR'(NO_2)-C_6H_2N(O)=NC_6H_2(NO_2)_2R''$  (I.  $R = 5-NO_2$ ,  
a  $R' = OCH_3$ ,  $R'' = Cl$ ; b  $R' = Cl$ ,  $R'' = OCH_3$ ;  
c  $R' = OH$ ,  $R'' = Cl$ ; d  $R' = Cl$ ,  $R'' = OH$ ) is  
described. Their existence is a new confirmation  
of the theory of Angeli (Angeli A., Jazz. chim.  
ital., 1916, 46, (2), 67) concerning the asymmetric

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POLAND / Organic Chemistry. Synthesis.

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Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23335

Abstract: structure of the azoxy group. I ( $R = 5\text{-H}$ ,  $R' = \text{OCH}_3$ ,  $R'' = \text{OH}$ ) is treated with  $p\text{-CH}_3\text{C}_6\text{H}_4\text{SO}_2\text{Cl}$  in the presence of  $\text{C}_6\text{H}_5\text{NO}_2$  and  $\text{C}_6\text{H}_5\text{N}(\text{C}_2\text{H}_5)_2$ , the produced I ( $R = 5\text{-H}$ ,  $R' = \text{OCH}_3$ ,  $R'' = \text{Cl}$ ) (Ie) is nitrated ( $80^\circ$ ) with a mixture of  $\text{HNO}_3$  and  $\text{H}_3\text{PO}_4$  (2:1), and Ia (melt. p.  $185\text{-}186^\circ$ ) is obtained. By the saponification ( $\text{HBr}$  acid,  $\text{CH}_3\text{COOH}$ ,  $110^\circ$ ) of Ia, Ic is produced melt. p.  $198\text{-}201^\circ$ . Ic is treated with  $\text{NaOH}$  solution in  $\text{CH}_3\text{OH}$  in the presence of ethylacetate, and Ib (melt. p.  $203\text{-}204^\circ$ ) is obtained from the produced I ( $R = 5\text{-NO}_2$ ,  $R' = \text{OH}$ ,  $R'' = \text{OCH}_3$ ) similarly to Ie. Id, melt. p.  $214\text{-}217^\circ$ , is obtained by saponification of Ib similarly

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POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 2335

Abstract: to Ic ( $120^\circ$ ). The great reaction capacity of the  
OCH<sub>3</sub> group in Ia as compared with Ib is noted.

-- V. Zaretskiy

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URBANSKI, T.; URBANSKI, J.

On products of nitration of bis-4,4'-(dimethylamine)-azoxybenzene.  
Bul Ac Pol chim 6 no.5:307-308 '58. (KEAI 9:7)  
(Bisdimethylaminoazoxybenzene)  
(Nitration)

G

POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Lhimiya, No 7, 1959, 23323

Author : Semenczuk, A.; Urbanski, T.

Inst : Academy of Sciences, Poland

Title : On Preparation of N,2,4,6-Tetranitromethylaniline  
with Fuming Nitric Acid in Presence of Inert  
Organic Solvents.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol., et  
geogr., 1958, 6, No 5, 309-311, XXIV.

Abstract: The nitration of  $C_6H_5N(CH_3)_2$  (I) by the action of  
 $HNO_3$  ( $d = 1.52$ ) (II) in the presence of the sol-  
vents  $CHCl_3$ ,  $CH_2Cl_2$ ,  $CCl_4$  or  $C_2H_2Cl_4$  proceeds  
smoothly and results in N,2,4,6-tetranitromethyl-  
aniline (III). The solution of 6 g of I in 75 g  
of  $CHCl_3$  is added dropwise to the solution of 75 g

Card 1/2

POLAND / Organic Chemistry. Synthesis.

G

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23323

Abstract: of II in 75 g of  $\text{CHCl}_3$  and the mixture is heated to  $40^\circ$ . After the separation of  $\text{NO}_2$  has discontinued, the temperature is raised to  $61^\circ$  and, after the distillation of the solvent, to  $80^\circ$  (until the color of the substance becomes light-orange). 50 ml of water is added and III is obtained, yield 98%, melt. p.  $129^\circ$ . If the nitration has been carried out in  $\text{C}_2\text{H}_2\text{Cl}_4$ , the solution of III in II is separated by decantation, yield of III = 92%.  
-- V. Zaretskiy

Card 2/2

G-2

Urbanski, T.

POLAND/Physical Chemistry - Molecule. Chemical Bond. B-4

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30152

Author : Eckstein, Z., Krackiewicz, T., Sacha, A.,  
Urbanski, T.

Inst : Polish Academy of Sciences

Title : Note on the absorption Spectra of 2-Nitro-2-(1'-cyclohexenyl)- and 2-Nitro-2-(1'-cycloheptenyl)-1-p-chlorophenylethylene

Orig Pub: Bull Acad Polon Sci, Ser Sci Chim, Geol, et  
Geograph, 1958, No 5, 313-318, XXIV-XXV

Abstract: The absorption spectra of 2-nitro-2-(1'-cyclohexenyl)- (I) and 2-nitro-2-(1'-cycloheptenyl)-1-p-chlorophenylethylene (II) have been investigated in the UV region (2000-4500 Å) and in the IR region (2-14/μ). The spectra of I and II are very similar. The 3030 (2985) cm<sup>-1</sup>

Card 1/3

POLAND/Physical Chemistry - Molecule. Chemical Bond. B-4

Abs Jour: Referat Zhur + Khim, No. 9, 1959, 30152

has been correlated with the intraplanar deformation vibrations of the ethylenic CH group. The 826  $\text{cm}^{-1}$  band, which is characteristic for the deformation vibrations of the CH group in tri-substituted cis-ethylenes, confirms the cis-configuration of I and II. This configuration is apparently stabilized by the presence of the olefinic rings in both molecules. The synthesis of II is described. -- V. Koryazhkin

Card 3/3

SLOPEK, S.; MORDARSKA, H.; MORDARSKI, M.; URBANSKI, T.; SKOWRONSKA-SERAFIN, B.;  
DABROWSKA, H.

On antineoplastic activity of some guanidine derivatives in  
vitro. Bul Ac Pol chim. 6 no.6:355-359 '58. (EEAI 9:6)

1. Institute of Immunology and Experimental Therapy, Polish  
Academy of Sciences. Institute of Organic synthesis (Warsaw),  
Polish Academy of Sciences, Institut of Tuberculosis, Warsaw.  
Presented by T. Urbanski.

(Guanidine) (Antigens and antibodies)  
(Tumors) (Cells)



SLOPEK, S.; MORDARSKA, H.; MORDARSKI, M.; URBANSKI, T.; GURNE, D.

On antineoplastic activity of some 1,3-oxazine derivatives in  
vitro. Bul Ac Pol chim. 6 no.6:361-363 '58. (REAL 9:6)

1. Institute of Immunology and Experimental Therapy (Wroclaw),  
Polish Academy of Sciences. Institute of Organic Synthesis (Warsaw),  
Polish Academy of Sciences. Institute of Tuberculosis, Warsaw.  
Presented by T.Urbanski.

(Oxazine)

(Antigens and antibodies)

(Tumors)

(Cells)

URBAWSKI, T.; SKOWRONSKA-SERAFIN, B.; STEFANIAK, L.; VESULET, J.; JANOWIEC, M.;  
JAKIMOWSKA, K.; URBANSKA, A.

On iso-nicotinoylhydrazones of ethyl acetylacetate and its anti-  
tuberculous activity. Bul Ac Pol chim. 6 no.8:475-479 '58.  
(KHAL 9:6)

1. Institute of Tuberculosis, Warsaw. Technical University  
(Politechnika), Warsaw. Communicated by T.Urbanski.  
(Isonicotinoylhydrazones) (Ethyl acetoacetate)  
(Tuberculosis)

URBANSKI, T.; SIKORSKA, A.

On the sensitiveness of 2,4,6-trinitrotoluene to impact. Bul Ac  
Pol chim 6 no.10:617-620 '58. (KEAI 9:6)

1. Department of Organic Technology, Technical University  
(Politechnika), Warsaw. Presented by T.Urbanski.  
(Trinitrotoluene) (Explosives)

ECHESTEIN, Z.; SACHA, A.; SOBOTKA, W.; Urbanski, T.

On preparation and properties of 1-cyclooctenyl nitromethane. Bul  
Ac Pol chim 6 no.10:621-624 '58. (KAI 9:6)

1. Institute of Organic Synthesis, Polish Academy of Sciences.

Institute of Pharmacy, Warsaw. Presented by T. Urbanski.

(Nitromethane)	(Cyclooctene)
(Cyclooctanone)	(Olefins)

URBANSKI, T. : Poland  
 ORG. NO. :

..-15

ABST. FOUR. : RZhKhim., No. 21 1959, No. 75947

AUTHOR : Eckstein, Z., Halweg, H., Krakowka, P., and\*

INSTR. : Not given

TITLE : On the Fungistatic Activity of 3,4-dichlorophenoxy  
 -acetohydroxamic Acid on Pathogenic Molds in vitro

ORIG. PUB. : Med Doswiad i Mikrobiol., 10, No 4, 487-492 (1958)

ABSTRACT : See RZhKhim., 1959, 6, 20704.

CARD: 1/1 \* Urbanski, T.

240

POLAND/Physical Chemistry - Molecule. Chemical Bond.

B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67057

Author : Urbanski, Tadeusz

Inst : -

Title : Aliphatic Nitro Compounds. XXXV. Concerning the  
Infrared Spectra of Amino Nitro Compounds Derived from  
Nitroparaffins.

Orig Pub : Roczn. chem., 1958, 32, No 2, 241-254

Abstract : Infrared absorption spectra of certain derivatives of  
1- and 2-nitropropane containing sec- and tert-amino  
groups and hydroxyl groups. Study of the valence-vibra-  
tion absorption region of N-H bonds confirms the earlier  
stated assumption that a hydrogen bond may arise between  
the nitro and amino groups. The latter hydrogen-bond

Card 1/2

- 6 -

Physical Chemistry - Molecule. Chemical Bond.

B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67057

formation has little effect on the frequency of asymmetric and symmetric valence vibrations of  $\text{NO}_2$ . The small decrease in the  $\text{NO}_2$  (sym.) is explained by steric factors. A band of the C-O-C group at  $1111 \text{ cm}^{-1}$  was identified in the spectra of compounds containing the 1,3-oxazine or the 1-oxa-3-azacyclooctane ring. See Communication XXXIII in RZhKhim, 1959, No 8, 27503.  
-- V. Aleksanyan

Card 2/2

Country	: POLAND	G
Category	: Organic Chemistry. Synthetic Organic Chemistry	
Abs. Jour	: Ref Zhur - Khim., No 5, 1959,	No. 15351
Author	: Mikulski, J.; Eckstein, Z.; Urbanski, T.	
Institut.	: -	
Title	: On the Problem of Synthesis of Herbicides. VI. Synthesis of 2-Aryloxyethylamines and Their Derivatives	
Orig Pub.	: Roczn. chem., 1958, 32, No 3, 661-666	
Abstract	: As a result of further search of active herbicides (report V, see Ref Zhur-Khim, 1958, 32402), a series of $\text{ArOCH}_2\text{CH}_2\text{NHCOR}$ (I) was synthesized. By the interaction of $\text{ArONa}$ and $\text{BrCH}_2\text{CH}_2\text{Br}$ (II), $\text{ArOCH}_2\text{CH}_2\text{Br}$ (III) is obtained. By the urotropine method, III is transformed into $\text{ArOCH}_2\text{CH}_2\text{NH}_2$ (IV); under the influence of $\text{RCOOC}_2\text{H}_5$ (V), I is obtained from IV. 1.1 moles of NaOH in 180 ml. of water are slowly poured	
Card:	1/6	

G 27



Country	:		G
Category	:		
Abs. Jour	:	Ref Zhur - Khim., No 5, 1959,	No. 15351
Author	:		
Institut.	:		
Title	:		
Orig. Pub.	:		
Abstract cont'd.	:	<p>into 1.1 moles of 2,5-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>OH in 400 ml. of water and 1.2 moles of II during boiling, and boiled for five hours; III is extracted with ether, Ar=2,5-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub> (IIIa), yield 45%, b.p. 150-152°/3 mm. III is obtained analogously (Ar, yield in %, b.p. in °C./mm., n<sub>D</sub><sup>20</sup>, d<sub>4</sub><sup>20</sup> are given): C<sub>6</sub>H<sub>5</sub>, 42, 112-113/4, 1.5525, 1.3555; 2-CH<sub>3</sub>C<sub>6</sub>H<sub>4</sub> (IIIb), 61, 118-120/3, 1.5444, 1.2900; 2-CH<sub>3</sub>-4-ClC<sub>6</sub>H<sub>2</sub>, 40, 138-140/3.5, 1.5600, 1.3166; 2,4-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, 60, 147-149/4,</p>	
			2/6

Country :  
Category :

G

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract : 1.5785, 1.5929; 2,4,5-Cl<sub>3</sub>C<sub>6</sub>H<sub>2</sub>, 45, 158-160/2,  
cont'd. -, -. 1.05 moles of IIIb in 200 ml. of CHCl<sub>3</sub>  
are added to 1.1 moles of (CH<sub>2</sub>)<sub>6</sub>N<sub>4</sub> (VI) in  
600 ml. of CHCl<sub>3</sub> at 50°, and heated for four  
hours at 45°; 90% of IIIb·VI is separated out,  
m.p. 172-173° (from chloroform). Similarly,  
with slight alterations, IIIa·VI is obtained,  
yield 80%, m.p. 176-179° (from chloroform).  
0.56 mole of IIIb·VI is poured into 460 g. of  
concentrated HCl and 700 ml. of CH<sub>3</sub>OH, mixed

Card: 3/6

Country : G  
 Category :  
 Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351  
 Author :  
 Institut. :  
 Title :  
 Orig Pub. :  
 Abstract : at 40° for four hours, the solvent is distilled  
 cont'd. off, the residue is alkalized by NaOH and IV is  
 extracted with ether, Ar=2-CH<sub>3</sub>C<sub>6</sub>H<sub>4</sub>, yield 62%,  
 b.p. 90-91°/2 mm.; hydrochloride (HC), m.p.  
 212-213°. Analogously, from the corresponding  
 III-VI, IV is synthesized (Ar, yield in %, b.p.  
 in °C./mm., m.p. in °C. of HC are given): C<sub>6</sub>H<sub>5</sub>,  
 45, 101-103/4, 215-216; 2-CH<sub>3</sub>-4-ClC<sub>6</sub>H<sub>3</sub>, 58,  
 136-138/2, 165; 2,4-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, 51, 164-165/3,  
 188-191; 2,5-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, 42, 162-164/4, 253-254;  
 Card: 4/6

Country :  
Category :

G

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15351

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract : 2,4,5-Cl<sub>3</sub>C<sub>6</sub>H<sub>2</sub>, 49, 168-171/5, 244-246. 0.02 mole  
cont'd. of V, R=Cl<sub>2</sub>CH or Cl<sub>3</sub>C, in 5 ml. of alcohol,  
is added to 0.015 mole of IV in 5 ml. of alco-  
hol, heated at 60-70° for two hours, and I is  
separated out (Ar, R, yield in %, m.p. in °C.  
are given): C<sub>6</sub>H<sub>5</sub>, CHCl<sub>2</sub>, 75, 85-86; C<sub>6</sub>H<sub>5</sub>, CCl<sub>3</sub>,  
77, 63-64; 2-CH<sub>3</sub>C<sub>6</sub>H<sub>4</sub>, CHCl<sub>2</sub>, 90, 93-94; 2-OH<sub>3</sub>-  
C<sub>6</sub>H<sub>4</sub>, CCl<sub>3</sub>, 90, 74-75; 2-CH<sub>3</sub>-4-ClC<sub>6</sub>H<sub>3</sub>, CCl<sub>3</sub>,  
67, 86-87; 2,4-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, CHCl<sub>2</sub>, 70, 106-107;

Cards: 5/6

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Country	:	
Category	:	G
Abs. Jour	:	Ref Zhur - Khim., No 5, 1959, No. 15351
Author	:	
Institut.	:	
Title	:	
Orig Pub.	:	
Abstract cont'd.	:	2,4-Cl <sub>2</sub> C <sub>6</sub> H <sub>3</sub> , CCl <sub>3</sub> , 75, 67-68; 2,5-Cl <sub>2</sub> C <sub>6</sub> H <sub>3</sub> , CHCl <sub>2</sub> , 90, 120-121; 2,5-Cl <sub>2</sub> C <sub>6</sub> H <sub>3</sub> , CCl <sub>3</sub> , 95, 97-98; 2,4,5-Cl <sub>3</sub> C <sub>6</sub> H <sub>2</sub> , CHCl <sub>2</sub> , 80, 137-138; 2,4,5-Cl <sub>3</sub> C <sub>6</sub> H <sub>2</sub> , CCl <sub>3</sub> , 78, 116-117.-- V. Sko- rodumov

Country : Poland G  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Ref. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42375  
 Author : Balzecki, Szeslaw; Urbanaki, Tadeusz  
 Institut. : Not given  
 Title : Thiosemicarbazones of Keto acids. II.  
 Thiosemicarbazones of Aroylaliphatic Acids.  
 Pri. Pub. : Rozn. chem. 1958, 32, No.4, 769-773

Abstract : A series of  $\text{H}_2\text{C}=\text{CH}-\text{C}(\text{C}_6\text{H}_4\text{R}-4)(\text{CH}_2)_n\text{COOR}'$  (I) was synthesized for the purpose of producing tuberculostatically active compounds. 0.1 mole  $\text{H}_2\text{C}=\text{CH}_2$  in 10 ml. of boiling water is added to a boiling solution of 0.1 mole 4- $\text{RC}_6\text{H}_4\text{CO}(\text{CH}_2)_n\text{COOR}'$  (II) in 10 ml. of alcohol. The mixture is boiled for 0.5-0.6 hours with a few drops of HCl added; (I) is then obtained. (The article cites R,R',n, yield in % and melting point in  $^\circ$  (from alcohol) as follows):

Url: 1/6

Country : Poland G  
Category : Organic Chemistry. Synthetic Organic Chemistry

Abstr. Jour. : Ref Zhur-Khidiya, No.12, 1959, No.42575

author :  
Institut. :  
Title :

Orig. Pub. :

Abstract :  $\text{CH}_3\text{CONH}$ , H, O, 85, 199 (decomposition);  $\text{CH}_3\text{O}$ , H, O, 75, 163-164 (decomposition);  $\text{NH}_2$ ,  $\text{C}_2\text{H}_5$ , 1, 65, 182 (decomposition);  $\text{CH}_3\text{CONH}$ ,  $\text{C}_2\text{H}_5$ , 1, 63, 152 (decomposition);  $\text{CH}_3\text{O}$ ,  $\text{C}_2\text{H}_5$ , 1, 62, 123-124 (decomposition);  $\text{NH}_2$ , H, 2, 35, 126 (decomposition);  $\text{CH}$ , H, 2, 48, 224-225 (decomposition);  $\text{NH}_2$ , H 8 (Ia), 54, 127;  $\text{CH}_3\text{O}$ , H, 8 (Ib), 42, 113. 0.1 mole 4- $\text{NO}_2\text{C}_6\text{H}_4\text{COCH}_2\text{COOC}_2\text{H}_5$  in 500 ml. of absolute  $\text{CH}_3\text{CH}$  are hydrogenated for 4 hours over 0.3 g of  $\text{PtO}_2$  at 40-45°; the filtrate is

Q. 10: 2/6

Country : Poland G  
 Category : Organic Chemistry, Synthetic Organic Chemistry  
 Ref. Jour. : Ref. Zhur-Khimiya, No.12, 1959, No.42375  
 Author :  
 Institution :  
 Title :

Orig. Pub. :

Abstract : evaporated; the residue is diluted with 300 ml. of water; 20 ml. of concentrated HCl are added; the filtrate is cooled to 5°; 50 ml. of 20% NaOH are added; the yield of II is 54% (R=NH<sub>2</sub>, R'=C<sub>6</sub>H<sub>5</sub>, n=1), the melting point is 83-84° (from benzene); acetyl derivative, yield 82%, the melting point 97-98° (from dilute alcohol). II (R=CH<sub>3</sub>O, R'=C<sub>6</sub>H<sub>5</sub>, n=1), yield is 48%, boiling point 175-182°/2 mm. The pulverized mixture of 0.5 mole C<sub>6</sub>H<sub>5</sub>NHCOOCH<sub>3</sub> and 0.5 mole of sebacic

Card: 3/6



Country : Poland G  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. Jour. : Ref Zhur-Khimiya, No.12, No.42375  
 Author :  
 Institut. :  
 Title :

Orig Pub. :

Abstract : polyanhydride is poured into the suspension of 1.5 moles  $AlCl_3$  in  $CS_2$  at  $0-5^\circ$ ; the temperature is raised to about  $40^\circ$ ; the mixture is stirred for 3 hours and then set out for 48 hours at about  $20^\circ$ ; the reaction product is decomposed with ice and  $HCl$ ; the residue is dissolved in 70 g of  $NaHCO_3$  in 1.2 liters of water; the filtrate is acidified with  $CH_3COOH$ ; the residue is boiled for 15 minutes with 200 ml. of 10%  $HCl$ ; 50 ml. of saturated  $CH_3COONa$  are added

4/6

Country : Poland G  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. Jour. : Ref Zhur-Khimiya, No.12, No.42375

Author :  
 Institut. :  
 Title :

Orig. Pub. :

Abstract : upon cooling; II is separated ( $R=NH_2$ ,  $R^1=H$ ,  $n=8$ ),  
 the yield is 3%; the melting point is  $134^{\circ}$   
 (from benzoyl). All (I) products in the concen-  
 trations of 1.5-12.5% mg are active against  
 Mycobacteria BCG or H37Rv, but are inactive  
 against M. scrofulaceus. The tuberculostatic activ-  
 ity of compounds containing the  $CH_3O$  group is  
 somewhat higher than the tuberculostatic activ-  
 ity of compounds containing the  $NH_2$  group. The  
 length of the aliphatic chain apparently has no

7 rd: 5/6

Country : Poland G  
Category : Organic Chemistry, Synthetic Organic Chemistry  
Abs. Jour. : Ref Zhur-Khiniya, No.1., 1959, No.42375  
Author :  
Institut. :  
Title :  
Orig. Pub. :  
Abstract :decisive significance. However Ia, b have a high tuberculostatic activity. Introduction of the COOH group considerably lowers (to about 1/300) the tuberculostatic activity in vitro. See report I in Ref Zhur-Khiniya, 1958, No.10, 32371. -- V. Skorodumov.

Country	: Poland	G-2
Category	:	
Abs. Jour	:	45885
Author	: Belzecki, C. and <u>Urbancki, T.</u>	
Institut.	: Not given	
Title	: Thiosemicarbazones of Keto Acids. III. Thiosemicarbazones of Ethyl Esters of Aroylacetic Acids and Their Derivatives.	
Orig Pub.	: Roczniki Chem, 32, No 4, 779-787 (1958)	
Abstract	: In the course of the search for new antitubercular agents the authors have synthesized a series of compounds having the structure $RCSNHN=C(R)CH_2COO-C_2H_5$ (I). When I are heated or dissolved in $NH_4OH$ cyclization to 1-thioformamido-3-aryl-5-pyrazolones (II) occurs. A number of 3-aryl-5-pyrazolones (III) and 3-aryl-5-isooxazolones (IV) have also been prepared. 0.1 mol $RCHOCH_2COOC_2H_5$ (V) in hot alcohol is treated rapidly with 0.1 mol $NH_2CSNHNH_2$ (VI) in 10 mol water, the solution is	

Card: 1/8

Country	:	Poland	U-2
Category	:		
Abs. Jour	:		+5885
Author	:		
Institut.	:		
Title	:		
Orig Pub.	:		
Abstract	:	<p>refluxed 0.5-6 hrs with the addition of several drops of HCl (acid), and the I which separates is recrystallized from alcohol (method A). A mixture of V and VI (0.1 mol each) is ground in a mortar, fused at 105-115° until the fuming stops, the melt is mixed with water, and the precipitate is recrystallized from alcohol (method B). The following I were obtained (R, the method used, and the decomp temp in °C are given in that order): 4-NO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, A, 170-172; 4-NH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>,</p>	

Card: 2/3

Country : Poland  
Category :

G-2

Abs. Jour :

45885

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract : B, 162; 4-CH<sub>3</sub>CONHCO<sub>2</sub>H<sub>4</sub>, B, 152; 4-CH<sub>3</sub>OC<sub>6</sub>H<sub>4</sub> (Ia),  
A, 123-124; 4-BrC<sub>6</sub>H<sub>4</sub> (Ib), A, 172-173; -pyri-  
dyl, A, 153; -pyridyl, A, 169-170. V and VI  
(0.1 mol each) are ground and fused by method A,  
at first at 105° and then, when the foaming has  
ceased, the temperature is raised to 10-15° below  
the mp of the given I; the increase in tempera-  
ture is accompanied by renewed foaming; the  
temperature is raised an additional 10-20° and  
maintained at that level until the complete

Card: 3/8

Country	:	Poland	G-2
Category	:		
Abs. Jour	:		45885
Author	:		
Institut.	:		
Title	:		
Orig. Pub.	:		
Abstract	:	<p>cessation of foaming, and the melt is ground with water and II and recrystallized from alcohol. When method B is used, 0.1 mol I in a ten-fold excess of liquid paraffin is heated to a temperature 5-10° above the mp of the given I; at the completion of the melting of I and the termination of the reaction, II separates out; the latter is isolated and washed with ether. The aryl group, method, and decomp temp in °C are given in that order for the following II:</p>	

Card: 4/8

Country : Poland  
Category :

G-2

Abs. Jour :

45885

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract : 4-NO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, B, 264-268; 4-NH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, A, 224-226;  
4-CH<sub>3</sub>CONHC<sub>6</sub>H<sub>4</sub>, A, 259-261; 4-CH<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>, B, 165;  
4-BrC<sub>6</sub>H<sub>4</sub>, B, 251;  $\beta$ -pyridyl, A, 236;  $\gamma$ -pyridyl,  
A, 222-223. 0.1 mol V in a ten-fold excess of  
alcohol is treated with 0.5 mol N<sub>2</sub>H<sub>4</sub>·H<sub>2</sub>O and  
heated for 15 min to give III, yield 50-75% (the  
aryl group and the decomp temp in °C (from alc)  
are given in that order): 4-NO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, 238-239;  
4-NH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, 235-236; 4-CH<sub>3</sub>CONHC<sub>6</sub>H<sub>4</sub>, 261-263;  
4-CH<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>, 222-223; 4-BrC<sub>6</sub>H<sub>4</sub>, 248-249;  $\beta$ -pyridyl,

Card: 5/3



Country	:	Poland	G-2
Category	:		
Abs. Jour	:		45885
Author	:		
Institut.	:		
Title	:		
Orig Pub.	:		
Abstract	:	<p>259-260; <math>\delta</math>-pyridyl, 278-279. 0.1 mol V in 100 ml CH<sub>3</sub>OH is refluxed and 0.15 mol NH<sub>2</sub>OH in 100 ml CH<sub>3</sub>OH are added quickly, the solution is allowed to stand 24 hrs in the refrigerator, the Na salt of the enol-form of IV is washed with CH<sub>3</sub>OH, dissolved in water, and the solution is acidified with dil CH<sub>3</sub>COOH to give 20-40% IV (the aryl group and decomp temp in °C (from alc) are given): 4-HO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, 161-162; 4-NH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, 182; 4-CH<sub>3</sub>CONHC<sub>6</sub>H<sub>4</sub>, 190; 4-CH<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>, 145; 4-BrC<sub>6</sub>H<sub>4</sub>, 141-143; <math>\beta</math>-pyri-</p>	

Card: 6/8

Country : Poland  
Category :

G-2

Abs. Jour :

45885

Author :  
Institut. :  
Title :

Orig Pub. :

Abstract : dyl, 151-153; 1-pyridyl, 199. The results from the tests of the tuberculostatic activity (TSA) in vitro on *M. tuberculosis* strains H37Rv and BCG as well as on *M. smegmatis* are reported. Among the I prepared, Ia and Ib were found to be most accurate. The compounds IIa, b were found to be more active than the correspondingly substituted I. A decrease in TSA is observed when the NH<sub>2</sub>CS group is removed; No correlation could be made between the effect of the p-substituent

Card: 7/8

Country	:	Poland	G-2
Category	:		
Abs. Jour	:		45885
Author	:		
Institut.	:		
Title	:		
Orig Pub.	:		
Abstract	:	and the TSA of III. The activity of IV is analogous to that of III. For Communication II see RZhKhim, No 12, 1959, 42375. V. Skorodunov	

Card: 8/8

G-2

Country : Poland

Category :

45876

Abs. Jour :

Author : Urbaniski, T., Serafinowa, Z., and Stefaniak, L.

Institut. : Not given

Title : The Preparation of Diacylhydrazines from Acylhydrazines

Orig Pub. : Roczniki Chem, 32, No 4, 957-961 (1958)

Abstract : The hydrazone  $RCONHN=C(CH_3)CH_2COOC_2H_5$  (I, R =  $-C_6H_4N$ ), obtained by the reaction of isonicotinic acid hydrazide (II) with acetoacetic ester (III), on refluxing in water (2 hrs) is converted to 1,2-diisonicotinoylhydrazine (IV), yield 93%, mp 260-261°: the reaction is accompanied by the formation of small quantities of 4',5'-dimethylpyrazolo-(4',3'-5,6)- $\alpha$ -pyrone, mp 245-246° (from alc). IV is also prepared in 70-78% yields by refluxing an equimolar mixture of II and III


Card: 1/2

W. Witkovskiy

Country : Poland G  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 No. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379  
 Author : Sobótka, Wiesław; Bokstein, Zygmunt; Urbanski, T.  
 Institut. : Not given  
 Title : Contribution to the Problem of Synthesizing  
 Herbicides. VII Esters of Aryloxyacetic Acids  
 with Aliphatic Nitroalcohols.  
 Orig. Pub. : Roczn. chem., 1958, 32, No.4, 963-970  
 Abstract : The following three groups of the esters of  
 aryloxyacetic acids and aliphatic nitroalcohols  
 were synthesized: (2, 4, 5-Cl<sub>3</sub>C<sub>6</sub>H<sub>2</sub>-OCH<sub>2</sub>COOCH<sub>2</sub>)-  
 C(NO<sub>2</sub>)R (I), substitution 1,3-dioxane (II) and  
 R-CH<sub>2</sub>COCH(COCl)<sub>2</sub>CH<sub>2</sub>NO<sub>2</sub> (III). (I) is obtained  
 by the action of R-CH<sub>2</sub>COCl (IV), where R=  
 =1,2,5-Cl<sub>3</sub>C<sub>6</sub>H<sub>2</sub> (IVa), on RC(NO<sub>2</sub>) (V) in CHCl<sub>3</sub> in  
 the presence of pyridine (method A). (II) is  
 synthesized by the action of IV on the corres-  
 ponding alcohols in pyridine (method B).  
 Card: 1/6

Country : Poland G  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379  
 Author :  
 Institut. :  
 Title :

Orig. Pub. :

Abstract :  II

III cannot be obtained by methods A and B but is formed by the reaction of  $\text{ROCH}_2\text{COCl}$  (VI) with  $\text{NO}_2\text{CH}_2\text{CH}(\text{CCl}_3)\text{OH}$  (VII). (II) ( $\text{R}=\text{2,4,5-Cl}_3\text{C}_6\text{H}_2$ ,  $\text{R}'=\text{R}''=\text{CH}_3$ ) (IIa) under the action of alcohol. HCl opens the ring, forming  $2,4,5\text{-Cl}_3\text{C}_6\text{H}_2\text{OCH}_2\text{-COOCH}_2\text{C}(\text{NO}_2)(\text{CH}_2\text{OH})_2$  (VIII). 0.02 mole V and 0.04 mole IVa in 40 ml. of  $\text{CHCl}_3$  and 12 ml. of  $\text{C}_5\text{H}_5\text{N}$  are heated at  $50^\circ$  for 30 minutes; the

2/6

Country : Poland  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Ref. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379  
 Author :  
 Institut. :  
 Title :

Orig. Pub. :

Abstract : (The article cites R, yield in %, and the melting point in °C (from alcohol) as follows):  
 2,4,5-Cl<sub>3</sub>C<sub>6</sub>H<sub>2</sub>OCH<sub>2</sub>, 20, 108; Cl, 25, 113; Br, 22, 105; CH<sub>3</sub>, 17, 138; C<sub>2</sub>H<sub>5</sub>, 17, 126. 0.03 mole IV is added to 0.02 mole 5-nitro-5-oxymethyl-2,2-dimethyl (or 2-phenyl)-1,3-di-dioxane in 15 ml. of C<sub>5</sub>H<sub>5</sub>N at 0°. The mixture is heated for 30 minutes at 60-65°, then poured into 200ml. of water with ice; II is separated. (The article cites R, R', R'', yield in % and the melting

Card: 3/6

Country : Poland  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42379  
 Author :  
 Institut. :  
 Title :

Orig Pub. :

Abstract : point in  $^{\circ}\text{C}$  (from alcohol) as follows):  
 2,4,5- $\text{Cl}_3\text{C}_6\text{H}_2$ , H,  $\text{C}_6\text{H}_5$ , 20, 115; 2,4- $\text{Cl}_2\text{C}_6\text{H}_3$ , H,  
 $\text{C}_6\text{H}_5$ , 30, 148; 2- $\text{CH}_3$ -4- $\text{ClC}_6\text{H}_3$ , H,  $\text{C}_6\text{H}_5$ , 38, 103;  
 2,4,5- $\text{Cl}_3\text{C}_6\text{H}_2$ ,  $\text{CH}_3$ ,  $\text{CH}_3$ , 25, 128; 2,4- $\text{Cl}_2\text{C}_6\text{H}_3$ ,  
 $\text{CH}_3$ ,  $\text{CH}_3$ , 31, 105; 2- $\text{CH}_3$ -4- $\text{ClC}_6\text{H}_3$ ,  $\text{CH}_3$ ,  $\text{CH}_3$ ,  
 (Iib), 10, 92. 4 g of absolute  $\text{AlCl}_3$  are grad-  
 ually added to the mixture of VI and VII in the  
 amounts of 0.04 mole of each in 20 ml  $\text{CCl}_4$ . The  
 mixture is heated at about  $100^{\circ}$  until the se-  
 paration of HCl has stopped; the solvent is



Country : Poland G  
 Category= : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. Jour. : Ref Zhur-Khimiya, No.12, 1952, No. 42379  
 Author :  
 Institut. :  
 Title :

Orig. Pub. :

Abstract : removed in vacuum; the residue is extracted with ether; the extract is flushed with water; III is separated. (The article cites R, yield in % and the melting point in  $^{\circ}$  (from petroleum ether ethylacetate) as follows): 2,4- $\text{Cl}_2\text{C}_6\text{H}_3$  (IIIa), 28, 65 (2,4- $\text{Cl}_2\text{C}_6\text{H}_3\text{OH}_2\text{COOC}_6\text{H}_3\text{Cl}_2-2',4'$  is obtained together with IIIa); 2,4,5- $\text{Cl}_3\text{C}_6\text{H}_2$ , 30, 80. 14 moles of IIa in 30 ml. of alcoholic HCl are boiled for 5 minutes, then poured into 300 ml. of  $\text{NaHCO}_3$ ; the yield is one g of VIII,

Card: 5/6

Country : Poland G  
 Category : Organic Chemistry. Synthetic Organic Chemistry  
 Abs. J. : Ref Zhur-Khimiya, No.12, 1959, No.42379  
 Author :  
 Institut. :  
 Title :

Orig Pub. :

Abstract : the melting point is 80-82° (from chloroform).  
 IIB and IIIa proved to be most significant from  
 the standpoint of herbicide activity. See  
 Report VI in Ref Zhur-Khimiya, 1959, No.5,  
 15351. -- V. Shorodumov.

Card: 6/6

COUNTRY : Poland G-1  
 CATEGORY : Organic Chemistry - Theoretical Organic Chemistry  
 ABS. JOUR. : AZKhim., No. 24 1959, No. 20436  
 AUTHOR : Kolinski, R.; Piotrowska, E.; Urbanek, T.  
 INST. :  
 TITLE : Reactions of Aliphatic Nitrocompounds. XXVII. On Stereochemistry of Derivatives of 1,5-Diazacyclo-octane.  
 ORIG. PUB. : Roczn. chem., 1958, 32, No 6, 1289-1300  
 ABSTRACT : 3,7-Dialkyl-3,7-dinitro-1,5-diazacyclo-octanes (I) form only nonchlorides (NC) and mono-N-nitroso-derivatives (NB). This is due to the presence of internal hydrogen bond, which is confirmed by infrared spectrum. Calculations and measurements of magnitude of dipole moments (DM) show that in cis-, as well as in trans-1 (where alkyl = C<sub>2</sub>H<sub>5</sub>, is and is, respectively) the eight-membered ring of 1,5-diazacyclo-octane has the form of a "crown". Calculations and measurements of DM also show that the molecule of 3,6,10-triethyl-3,7,10-trinitro-1,5-diazacyclo-(3,3,3)-nonane (II), consisting of two combined rings of 1,5-diazacyclo-octane, has the form of a "double chair". Infrared spectrum  
 CARD: 1/3

COUNTRY : POLAND  
CATEGORY :

ABST. JOUR. : RZKhim., No. 1959, No. 26436

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : data are given for Ia, b, i, where  $i = CH_3$  or  $C_2H_5$ , and II, and also NDN for the "crown" form of different conformations. Synthesis of Ia, its NC, and ND has been carried out. 0.1 mole  $C_6H_5C(NO_2)(CH_2OH)_2$  in 0.5 mole of 2%  $NH_4OH$  is heated 1 hour at about  $100^\circ$ , the tarry reaction product is dissolved in alcoholic HCl and kept in refrigerator for 1-3 days, mixture of NC of Ia, b, is separated by recrystallization from alcohol, and there are isolated 6.7% of less soluble Ib and 0.5% Ia, MP  $169-171^\circ$ . 2 g II and 15 ml alcoholic HCl are heated at about  $100^\circ$ , as previously reported (see Communication XXX, RZKhim., 1959, No 4, 11737), to get 1.3 g of mixture of NC of Ia, b, from which  
CARD: 2/3

131

COUNTRY : Poland

1-1

CATEGORY :

ABST. JOUR. : RZKhim., No. 1959, No. 2446

AUTHOR :

INST. :

TITLE :

ORIG. PUB. :

ABSTRACT : are isolated from Ia. The HD of Ia is obtained from Ia base, MP 84-85° (from alcohol and ether). 0.2 g HD of Ia, in a small amount of water, are acidified with 10% solution of HCl, a 20% solution of HNO<sub>3</sub> is added, and ether is used to extract 0.1 g HD of Ia, MP 139-140° (from alcohol). On heating of HD of Ia with concentrated HCl, at 60°, there is obtained HD of Ia. Proceeding identification see RZKhim, 1959, No 19, 67057. -- V. Shorodanov.

CARD: 3/3

POLAND/Chemical Technology. Chemical Products and Their  
Application. Pesticides.

H-16

Abs Jour: Ref Zhur-Khin, No 2, 1959, 5860.

Author : Eckstein, Zygmunt; Hetnarski, Bodumil; Urbanski, Tadeusz.  
Inst :  
Title : Chemical Means of Control of Fungi. II. Concerning Some  
Derivatives of N-Allyl- and -Phenylmercurobenzoaxazolone  
and 6-Chlorobenzoaxazolone.

Orig Pub: Przen. chem., 1958, 37, No 1, 44-46.

Abstract: N-allyl- or N-phenylmercurobenzoaxazolones and corres-  
ponding derivative 6-halidebenzoaxazolones, as well as  
corresponding derivatives of 6-halidebenzoaxazolones of the  
general formula (I) are prepared by the action of R<sub>2</sub>HgHal  
or C<sub>6</sub>H<sub>5</sub>HgOCOCN<sub>2</sub> on Na or Ag salts of benzoaxazolone (II)  
and 6-halidebenzoaxazole. 0.01 mole of II is added to

Card : 1/4

POLLID/Chemical Technology. Chemical Products and Their  
Application. Pesticides.

H-18

Abs Jour: Ref Zhur-Khin., No 2, 1959, 5860.

the solution of 0.01 mole of  $C_3H_7HgCl$  (or  $C_3H_7HgBr$ ),

Card : 2/4

POLAR/Chemical Technology. Chemical Products and Their Application. Pesticides.

K-18

Abc Jour: Ref Zhur-Khin, No 2, 1959, 5860.

stirred for 15 min., 25 ml of water is added, and I (R = C<sub>4</sub>H<sub>9</sub>, Y = H) is obtained; yield 60.5%, melt. p. 105 - 107° (from 50% alcohol). The following were prepared in a similar way (Ys, Rs, yield in % and melting points in °C are enumerated): II, C<sub>4</sub>H<sub>9</sub>, 42.9, 156 - 158; III, C<sub>4</sub>H<sub>9</sub>, 50.6, 133.5 - 135.5; IV, n-C<sub>4</sub>H<sub>9</sub>, 56.4, 96 - 98; V, n-C<sub>4</sub>H<sub>9</sub>, 48.8, 92-93.5; VI, C<sub>4</sub>H<sub>9</sub>, 10.5, 193 - 195; VII, C<sub>4</sub>H<sub>9</sub>, 52.5, 161 - 163; VIII, n-C<sub>4</sub>H<sub>9</sub>, 65.9, 117.5 - 119; IX, n-C<sub>4</sub>H<sub>9</sub>, 44.2, 95 - 97; X, n-C<sub>4</sub>H<sub>9</sub>, 34.5, 83.5 - 84.5; XI, n-C<sub>4</sub>H<sub>9</sub>, 53.2, 111 - 112; XII, n-C<sub>4</sub>H<sub>9</sub>, 44.2, 108.5 - 110. 1.7 g of 6-chloro-benzoxazoline and later 3.4 g of CH<sub>3</sub>COOH in 20 ml of absolute alcohol are added to the solution of 0.2 g of Na in 25 ml of absolute alcohol. After stirring,

Card : 3/4

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POLAND/Chemical Technology. Chemical Products and Their  
Application. Pesticides.

II-10

Abs Jour: Ref Zhur-Khin., No 2, 1959, 5860.

15 ml of water is added and I ( $R = C_6H_5$ ;  $Y = Cl$ ) is obtained, yield 73.3%, melt. p. 216 - 218° (from the mixture alcohol : water : acetone = 43 : 7 : 25). I ( $R = C_6H_5$ ;  $Y = Cl$ ) [sic!] was obtained in a similar way, yield 70.7%, melt. p. 200 - 202°. *N*-alkyl derivatives in the concentration of 0.00005% suppress the growth of *Fusarium culmorum*, *Alternaria tenuis* and *Rhizoctonia solani*. The *N*-phenyl derivatives are less active. See RZhKhin, 1958, 15568 for part I. - A. Grapov.

Card : 4/4

POLAND/Chemical Technology - Chemical Products and Their  
Application. Pesticides.

H.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36163

Author : Eckstein, Z., Hetnarski, B., Urbanski, T.

Inst : -

Title : Chemical Means in the Struggle Against Fungi. III.  
Concerning Certain S-Alkyl- and S-Phenylmercury Deriva-  
tives of 2-mercaptobenzimidazole and 2-mercaptobenzoxa-  
zole.

Orig Pub : Przem. chem., 1958, 37, No 3, 160-161.

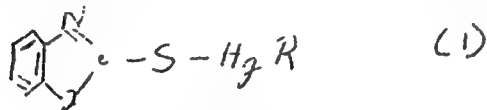
Abstract : 2-(S-alkylmercurmercaptop)-benzimidazole and -benzoxazole  
of the general formula (I) - where R is CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>,  
n-C<sub>3</sub>H<sub>7</sub>, n-C<sub>4</sub>H<sub>9</sub>, n-C<sub>5</sub>H<sub>11</sub>, C<sub>6</sub>H<sub>5</sub>, and Z is NH, O - are ob-  
tained by the action of RHgX (where X = Cl, Br, I or  
CH<sub>3</sub>COO) on the Na salt of 2-mercaptobenzimidazole or  
2-mercaptobenzoxazole (II). To a solution of CH<sub>3</sub>ONa,  
obtained from 0.013 mol of Na and 40 ml of CH<sub>3</sub>OH,

Card 1/3

POLAND/Chemical Technology - Chemical Products and  
Application. Pesticides.

Abstr Jour : Ref Zhur - 12-10120, 11-10, 1959, 3616

0.01 g of  $n\text{-C}_5\text{H}_{11}\text{HgCl}$  or  $n\text{-C}_5\text{H}_{11}\text{HgBr}$  are added,  
stirred with reagent C for 10 minutes, and I is obtain-  
ed (R -  $n\text{-C}_5\text{H}_{11}$ ; Z - NH); yield, 37.7%; melting point,  
134-135.5° from  $\text{CH}_3\text{OH}$ ). Analogously,



there are synthesized (Z, R, yield in percentages, melt-  
ing point in centigrades are indicated): NH,  $n\text{-C}_4\text{H}_9$ ,  
48.8, 146-148; O,  $\text{CH}_3$ , 54.1, 114-115.5; O,  $\text{C}_2\text{H}_5$ , 60.5,  
64-65; O,  $n\text{-C}_3\text{H}_7$ , 33.8, 56-58; O,  $n\text{-C}_4\text{H}_9$ , 36.6, 38-  
39.5. To a solution of  $\text{C}_2\text{H}_5\text{OHa}$  from 0.2 g of Ia and 25  
ml of absolute alcohol, 1.5 g of II are added, and then

Card 2/3

11-101

Distr: 4E3d/4E3b

✓ Tetryl and other aromatic amines. Skarb Państwa,  
Ministerstwo Obrony Narodowej (by A. Semeńczuk and T.  
Urbanowski). Pol. 41,964, June 2, 1960. A safe method of  
preparing tetryl is described, based on the nitration of Me<sub>2</sub>NPh  
(I) with HNO<sub>3</sub> in a solvent inert towards the latter at 80°.  
Suitable solvents are CH<sub>2</sub>Cl<sub>2</sub>, CHCl<sub>3</sub>, CCl<sub>4</sub>, CHCl<sub>2</sub>CHCl<sub>3</sub>,  
and aliphatic hydrocarbons. For example, an 8% tetryl  
soln. in CHCl<sub>3</sub> is introduced with const. stirring to a 60% I  
soln. (d. = 1.51) in CHCl<sub>3</sub> at <30°. The I:HNO<sub>3</sub> ratio  
should be 1:12. The mixt. is heated at 30°. When the  
evolution of N oxides stops, the temp. is raised to >60°,  
total nitration takes place, and CHCl<sub>3</sub> is distd. off. The re-  
maining soln. of tetryl in I is dild. with 3 parts H<sub>2</sub>O and  
cooled. Tetryl of high purity crystallizes, m. 129-30°.  
The total yield is 98%. When CCl<sub>4</sub> is used as a solvent,  
the I:HNO<sub>3</sub> ratio should be 1:18. K. Bojanowski

3  
1-2-2(1/2)  
2

URBANSKI, T.

The stereochemistry of some tetrahydro-1,3-oxazine derivatives. D. Glinne and T. Urbanski (Polish Acad. Sci., Warsaw). *J. Chem. Soc.* 1959, 1042-13; cf. C.A. 42, 176a. — Dipole moments of five 5-alkyl derivs. of tetrahydro-1,3-cyclohexyl-5-nitro-1,3-oxazine(1) indicated that the ring is in the chair form with the nitro and cyclohexyl groups in the axial and equatorial conformation, resp. NaHCO<sub>3</sub> (0.5 g.) and 0.9 g. cyclohexylamine added dropwise to 16.3 g. Me<sub>2</sub>CHC(NO<sub>2</sub>)(CH<sub>2</sub>OH)<sub>2</sub> (prepd. from Me<sub>2</sub>CHCH<sub>2</sub>NO<sub>2</sub> and H<sub>2</sub>CO) and the mixt. stirred 3 hrs. at 60-65° gave 33% 5-isopropyl deriv. of 1, m. 65-7° (EtOH). 5-Butyl deriv. of 1, m. 67-9° (EtOH), was obtained similarly in 53% yield from BuC(NO<sub>2</sub>)(CH<sub>2</sub>OH)<sub>2</sub> (prepd. from BuCH<sub>2</sub>NO<sub>2</sub>). Dipole moments in benzene for 5-alkyl derivs. of 1 were (substituent given): Me, 4.45; Et, 4.42; Pr, 4.41; iso-Pr, 4.56; Bu, 4.40 D. The calcd. value for the proposed conformation is 4.37 D., whereas those for the other possible conformations are considerably lower. R. H. Loepfert.

Hydrogen bonds between the nitro group and the hydroxyl or amino groups in substituted nitroparaffins. T. Urbanski (Inst. Technol., Warsaw). *Tetrahedron* 6, 1-4 (1959), cf. C.A. 49, 11414d.—The ultraviolet absorption spectra of many nitroparaffin derivs. contg. HO or NH<sub>2</sub> groups do not show a max. (260-70 mμ) typical of the NO<sub>2</sub> group. This is attributed to the formation of 6-membered chelate rings by internal H bonds between the NO<sub>2</sub> and HO or NH<sub>2</sub> groups. Two HO groups or one secondary NH<sub>2</sub> group are necessary to transform the normal max. of the NO<sub>2</sub> group into an inflexion. This is considered as new evidence for the mainly electrostatic nature of the H bond. H bonds between NO<sub>2</sub> and HO or NH<sub>2</sub> groups also produce a bathochromic effect with a shift of the corresponding max. or shoulders toward longer wavelengths (270-85 mμ). C. R. Addison

2  
K.M. my  
4E2c 19  
4E3d

115  
1/1

129

Distr: 4E3d

7  
Nitration of dimethylaniline in the presence of acetic acid  
or acetic anhydride. T. Urbanski and A. Semieczuk  
(Wojsk. Akad. Tech., Warsaw). Bull. acad. polon. sci.,  
Ser. sci., Chim., Biol. et géograph. 7, 91-2(1959)(in English);  
cf. CA 52, 19994s.—Dimethylaniline (6 g.) in 60 ml. CHCl<sub>3</sub>  
was slowly introduced to 60 ml. CHCl<sub>3</sub>, either 60 ml. Ac<sub>2</sub>O  
or 60 ml. AcOH, and 60 ml. HNO<sub>3</sub> (d. 1.50), the temp. being  
kept below 0°. The mixt. was left aside until 40° was  
reached spontaneously and the temp. began to fall, warmed  
on a water bath to 80°, cooled after about 8 hrs. when it  
became light-orange, and dild. with 100 or 150 ml. H<sub>2</sub>O to  
afford 90% N,2,4,6-tetranitromethylaniline, contrary to  
Orton (CA 1: 1274). Other proportions of HNO<sub>3</sub> and  
Ac<sub>2</sub>O or AcOH gave poorer results. J. Stecki

4  
1-BW(BW)  
1-202(WB)

Distr: 4E3d

(Effect of the conjugation on the position of the infrared band of the nitro group in some aromatic nitro compounds. T. Urbadski and H. Dabrowska (Politechnika, Warsaw). *Bull. acad. polon. sci., Sér. sci., Chim., géol. et géograph.* 7, 235-7(1959).—Infrared absorption spectra of o-, m-, and p-substituted benzenes were examd. The following frequencies were found (compd and concn. in wt. % in the CCl<sub>4</sub> soln., given): nitrobenzene, 1347, 0.02; o-nitrotoluene, 1348, 0.02; m-nitrotoluene, 1346, 0.02; p-nitrotoluene, 1345, 0.02; o-nitroaniline, 3550 and 3430, 0.05, and 1343, 0.02; m-nitroaniline, 3515 and 3425, 0.05, and 1348, 0.02; p-nitroaniline, 3530 and 3435, 0.05, and 1332, 0.02; o-nitrophenol, 3250 and 1320, 0.02; m-nitrophenol, 3615 and 1349, 0.02; p-nitrophenol, 3605 and 1340, 0.05, and 1339, 0.02; o-nitroanisole, 1352, 0.02; m-nitroanisole, 1347, 0.02; and p-nitroanisole, 1341 cm.<sup>-1</sup>, 0.02%; resp. The lowering of the frequency of the sym. stretching mode in p-substituted compds. is attributed to a strong conjugation. The lack of the frequency lowering in o-nitroaniline, exhibited by other o-compds., is thought to suggest the absence of H linkage between NO<sub>2</sub> and NH<sub>2</sub> groups. J. ~~Sci.~~

4

1BW(BW)

1JAJ(NB)

1

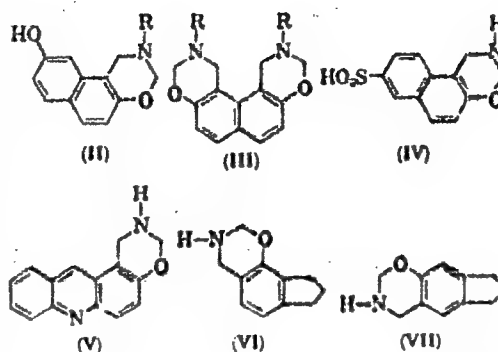


URBANSKI, T.

Dist: 4E3d

7

Derivatives of 3,4-dihydro-2H-1,3-benzoxazine condensed with aromatic rings in the 5,6-positions. B. Gac-Chylińska and T. Urbaniski (Zakład Syntezy Org. PAN, Warsaw). *Bull. Acad. polon. sci., Sér. sci. Chim., géol. et géograph.* 7, 635-7 (1959) (in English).—A primary amine added to an alk. soln. of  $\text{CH}_2\text{O}$  in MeOH and the resulting soln. mixed with a phenolic compd. gave the following derivatives of 3,4-dihydro-2H-1,3-benzoxazine (substituents, m.p. or b.p./mm., and m.p. of hydrochloride given): 3,7,8-( $\text{PhCH}_2$ )Me, 71-3°, 150-3°; 3,6,7-( $\text{PhCH}_2$ )Me, 87-8°, —; 3,5,7-( $\text{PhCH}_2$ )Me, 94-7°, —; 3,7,8-MeCl, 172-4°, 222-5°; 3,5,8-( $\text{PhCH}_2$ )(iso-Pr)Me, 174/3.5, 206-7°; 3,8,5-Me-(iso-Pr), 98°/0.2, —; 3,7,5-( $\text{PhCH}_2$ )MeEt, 39-41°, —. Similarly, 2,7-dihydroxynaphthalene (I),  $\text{CH}_2\text{O}$ , and an amine (1:2:1 molar ratio) gave the following II (R and m.p. given):  $\text{PhCH}_2$ , 139-40° (hydrochloride m. approx. 240°); Me, approx. 210° (decompn.); and Et, approx. 190° (decompn.). Similarly, I,  $\text{CH}_2\text{O}$ , and an amine (1:4:1 molar ratio) gave the following III (R and m.p. given):  $\text{PhCH}_2$ , 123-4°; Me, 171-3° (decompn.); and Et, 133-5°. Similarly, the N-benzyl derivs. of IV, V, VI, and VII (m. 234-5°, 131-2°, 73-5°, and 97-9°, resp.) were prepd.



5  
 644 (24)  
 133 (15)

J. Secki

URBANSKI, T.; SZYC-LEWANSKA, K.; KALINOWSKI, P.

On products of nitration of methylene blue. Bul Ac Pol chim 7 no.3:  
147-149 '59. (EEAI 9:7)

1. Technical Military College, Warsaw. Communicated by T.Urbanski.  
(Methylene blue) (Nitration)

POLAND/Optics - Spectroscopy.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9953

Author : Urbanski, T., Kuczynski, W., Hofman, W., Urbanik, H.,  
Witanowski, M.

Inst : -

Title : The Infrared Absorption Spectra of Extracted Coals

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim., geol. et  
geogr., 1959, 7, No 4, 207-214

Abstract : In the region  $750 - 4500 \text{ cm}^{-1}$ , the authors have investigated the infrared absorption spectra of several natural coals with different degree of carbonization: brown coal (I), hard coal (III), and anthracite (III) after extraction with a mixture of benzene (70%) with ethanol (30%). It is noted that as the increase of the carbon contents in the specimens of the coal increases, the overall background of their spectral absorption increases, particularly in the short wave region, this being explained

Card 1/2

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POLAND/Optics - Spectroscopy.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9953

by the graphitization of the structure of the coal. In spectra of I, an intense absorption band near approximately  $3350\text{ cm}^{-1}$  is observed, corresponding to the vibrations of the hydroxyl groups. Its intensity decreases with carbonization of the coal. In addition, bands are observed in the spectra near  $1690\text{ cm}^{-1}$  (carbonyl group of aromatic ketones) a group of bands in the region of  $1150 - 1280\text{ cm}^{-1}$  (valent vibrations of the C -- O bonds in phenols and ethers and deformation vibrations of the OH group); and many absorption bands of silicate impurities. The intensities of the bands of absorption of organic impurities decreases upon going from spectra of I to the spectra of II and III. Bibliography, 11 titles. -- A.N. Sidorov

Card 2/2

POLAND/Optics - Spectroscopy.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9948

Author : Urbanski, T., Hofman, N., Witanowski, M.

Inst : ~~Warsaw University~~

Title : Infrared Absorption Spectra of Some Polycyclic Vat Dyes  
Deriving from Antraquinone

Orig Pub : Bull. Acad. polon sci. Ser. sci. chim. geol. et geogr.,  
1959, 7, No 4, 215-221

Abstract : In the region  $750 - 4500 \text{ cm}^{-1}$ , infrared spectra were  
obtained for the absorption of polycyclic vat dyes deri-  
ved from antraquinone. An interpretation of the absorp-  
tion bands is given.

Card 1/1

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POLAND/Optics - Spectroscopy.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9929

Author : Urbanski, T., Dabrowska, U.

Inst :

Title : The Influence of the Conjugation on the Position of the Infrared Band of the Nitro Group in Some Aromatic Nitro Compounds

Orig Pub : Bull. Acad. polon. sci. Ser. sci. chim. geol. et geogr., 1959, 7, No 4, 235-237

Abstract : The authors have measured the position of the absorption band, corresponding to a symmetrical valent vibration of the nitro group in ortho, meta, and para nitro derivatives of toluol, aniline, phenol, anisol, and also in nitro benzene. To reduce the inter-molecular interactions, the investigated compounds were dissolved in carbon tetrachloride, (concentration 0.02 -- 0.25% by weight). It was found that the conjugate nitro groups with the benzene ring

Card 1/2

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POLAND/Optics - Spectroscopy.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960. 9929

lead to a reduction in the frequency of the absorption band of the nitro group. The para derivatives are absorbed in the region  $1332 -- 1345 \text{ cm}^{-1}$ , and the meta derivatives -- in the region  $1346 -- 1349 \text{ cm}^{-1}$ . In the ortho derivatives the conjugation is difficult owing to the space obstacles and the frequencies of the nitro group frequencies of the same order of magnitude as in the meta derivatives ( $1343 -- 1352 \text{ cm}^{-1}$ ). An exception is ortho nitro phenol ( $1320 \text{ cm}^{-1}$ ), owing to the presence of intermolecular hydrogen bond between the nitro group and the hydroxyl group. -- A.N. Sidórov

Card 2/2

ECKSTEIN, Z.; GROCHOWSKI, E.; URBANSKI, T.

On the fungicidal activity of derivatives of 2-nitropropanediol-1,3.  
Bul Ac Pol chim 7 no.5:289-294 '59. (EAI 9:9)

1. Institute of Organic Synthesis, Polish Academy of Sciences.  
Presented by T.Urbanski.  
(Nitropropanediol) (Fungicides)



URBANSKI, T.; HOFMAN, W.; OSTROWSKI, T.; WITANOWSKI, M. .

Infrared absorption spectra of products of carbonization of cellulose. *Bul.Ac.Pol.chim.* 7 no.12:851-859 '59. (KAI 9:5)

1. Laboratory of organic synthesis, Polish Academy of Sciences.  
Department of Organic Technology, Warsaw Technical University.  
(Absorption spectra) (Spectrum, Infrared) (Carbonization)  
(Cellulose)

URBAŃSKI, T.; HOFMAN, W.; WITANOWSKI, M.

Infrared absorption spectra of products of carbonization of lignin.  
Bul.Ac.Pol.chim. 7 no.12:861-859 '59. (KRAI 9:5)

1. Laboratory of Organic Synthesis, Polish Academy of Sciences.  
Department of Organic Technology, Warsaw Technical University.  
(Absorption spectra) (Spectrum, Infrared) (Carbonization)  
(Lignin)

Distr: 4E30

✓ Preparation of tetryl by nitration of dimethylaniline with fuming nitric acid in inert organic solvents. Antoni Sereniak and Tadeusz Urbaniak, *Biol. Wajtkowski Akad. Tech. im. Józefa Dobrowolskiego 8, No. 1, Poznań Chem.* 103-8(1959); cl. CA 52, 10091c.—PhNMe<sub>2</sub> (8 g.) in 60 cc. MeNO<sub>2</sub> (I) was added dropwise to 50 cc. fuming HNO<sub>3</sub> in 50 cc. I at about 0° with cautious stirring, heated to 45° till N oxides were removed, and at 80° till the soln. clarified completely. The mixt. was dild. with water, shaken, the I phase washed repeatedly with water, and I

distd. partially under reduced pressure at about 60° to allow the crystn. of 11.8 tetryl, m. 129°. A. Szafrański

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1-BW(BW)  
2-Inf (NEXmap)  
1

Distr: 4E3d

1  
Nitration of dimethylaniline with a mixture of nitric acid and acetic anhydride or acetic acid in chloroform. Antoni Semeńczuk and Tadeusz Urbanski. Biul. Wojskowej Akad. Techn. im. Jarosława Dąbrowskiego 8, No. 1, Prace Chem., 100-11(1959; cf. CA 52, 19991a.—PhNMe<sub>2</sub> (6 g.) in 60 cc. CHCl<sub>3</sub> was added dropwise to 60 cc. fuming HNO<sub>3</sub>, 60 cc. Ac<sub>2</sub>O and 60 cc. CHCl<sub>3</sub> at 0° with vigorous stirring and kept at room temp. When N oxides ceased to evolve, the mixt. was heated at 80° 8 hrs. till the soln. cleared completely, cooled and dild. with water. The tetryl produced (12.8 g.) m. 129° (Me<sub>2</sub>CO).  
A. Sztrażak

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1-ew(ew)

2- JAT(NG)(MAY)

1

Distr: 4E3d

Explosive properties of nitromethane. Tadeusz Urbanski  
and Marian Pawelec. *Biul. Walskovej Akad. Tech. sm.*  
*J. Dabrowskiego* (Warsaw) 8, No. 6, 120-4 (1959) English  
and Russian summaries. —Velocity of detonation by the  
Dautriche method (CA 1; 357) is 6190-6360 (m./sec., whereas  
measured with a time-recording oscillograph (Nahmani and  
Manheimer, CA 50, 11871d) is av. 6405 m./sec. Trauzl lead  
block test (picric acid as 100%) for MeNO<sub>2</sub> with azide-tetryl  
booster is 110%. Time of ignition (temp. given) 3.2 (570),  
3.8 (560), 4.45 (550), 5.6 (540), 6.3 (530), 6.8 (520), 7.0  
(510), 7.5 (500), 8.4 (490), 9.8 (480), 13.8 (470), and 186.6  
sec. (460°); activation energy over the range 460-570° is  
45,000 cal./mole. A review of data on MeNO<sub>2</sub> with 13  
references. A. Szafarski

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1-BW(BW)

1-JAJ(NB)

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Distr: 4E3d

7-228 (40/00)

V Properties of tetranitromethane. I. Thermal analysis of binary systems including tetranitromethane. Tadeusz Urbański, Mieczysław Piskorz, Władysław Cetner, Mirosław Maciejewski. *Bull. Wojskowej Akad. Tech. im. J. Dąbrowskiego* (Warsaw) 8, No. 42, 24-36 (1966) (English and Russian summaries).—Systems of tetranitromethane (I), b. 25-7°, m. above 13.9°, d. 1.644, with (m.p. given) benzene (above 5.4°) (II), nitrobenzene (above 5.5°) (III), *p*-nitrotoluene (above 51.0°) (IV),  $\alpha$ - and  $\beta$ -*o*-dinitrotoluenes (-10 and -4°) ( $\alpha$ -V,  $\beta$ -V), 1-nitronaphthalene (58.8°) (VI), 1,3-dinitrobenzene (90.1°) (VII), 2,4,6-trinitrotoluene (80.5°) (VIII), and Tetryl (129.5°) (IX), were examd. to find admixts. depressing the m.p. of I without affecting other properties. The eutectics (% of I given) were: I (70)-II, eutectic temp. -16.1°, I (87)-III -19.1°, I (82.5)-IV 1.5°, I (42.5)- $\alpha$ -V -24.0°, I (47.5)- $\beta$ -V -28.5°, I (90)-VI 9.3°, I (97)-VII 11.3°, and I (97)-VIII 12.3°, did not meet the stoichiometric O requirement for a propellant, and I sepd. as liquid phase. I-IX showed from I 25 to 92% a limited soly. I heated with Hexogen or 2,4-dinitroaniline to temps. above its b.p. underwent evapn. and decompn. II. The explosive properties of binary mixtures of tetranitromethane with some combustible or explosive substances. Tadeusz Urbański, Mieczysław Piskorz, Mirosław Maciejewski, Władysław

Cetner. *Ibid.* 37-41.—Velocity of detonation (*V* in m./sec.) according to Dautriche and Trauzl lead block enlargement (*E* in cc.), and brisance (Hess test on 25-g. sample with Pb cylinders: (a) according to Hess or (b) 22 mm. thick and 50 mm. in diam. (Meyer, *CA* 23, 4344) (*B* in mm.)) were: I (86.25)-II d. of cartridge 1.47, *V* 7180 (and 9180) *E* 519, *B* 22.0 (cylinder b), I (76.85)-III d. 1.53, *V* 7430, *E* 472 *B* 19.0 (cylinder b), I (78.70)-IV d. 1.52, *V* 8170, *E* 496, *B* 22.0 (cylinder b), I (78.70)-V d. 1.52, *V* 7730, *E* 479, *B* 18.0 (cylinder b), I (80.30)-VI d. 1.57, *V* 8160, *E* 489, *B* deformation of cylinder a, I (65.95)-VII d. 1.53, *V* 6670, *E* 649, *B* 9.0 (cylinder a), I (65.95)-VIII d. 1.58, *V* 6670, *E* 64, *B* 9.5 (cylinder a), I (49.00)-IX, d. 1.63, *V* 7100, *E* 569, *B* deformation of cylinder a, VIII itself d. 1.50, *E* 351, *B* 13.0 (cylinder b), and diethylene glycol dinitrate *E* 492. Sensitivity to impact as detd. by the Kast falling wt. test, expressed as work in kg. m. required to cause 50% of explosions, was: I (60.15)-VII 12, VII 19.5, I (65.95)-VIII 7, VIII 11-13, I (49.00)-IX 3, and IX 6.5-8 kg. m. Time required to ignite the explosive fastened to the end of a pendulum deflected by  $\alpha$  degrees, was: II 0 sec. at  $\alpha$  45-60°, I (66.25)-II 0 sec. at  $\alpha$  25°, I-II of varying compn. 0 sec. at  $\alpha$  13°, other systems 50 sec. at  $\alpha$  0°. A. Szafranski

Distr: 4E3d

Comparison of some properties of salts of methylene-  
disonitroamine and methylenedinitroamine. Mieczysław  
Piskors and Tadeusz Urbański. *Biol. Wojskowy Akad.  
Techn. im. Jędrzeja Dąbrowskiego* (Warsaw) 8, No. 84,  
113-116 (1959).—Ignition points for Ba, Ag, H, Na, and  
Pb(II) salts of  $\text{CH}_2(\text{NHNO}_2)_2$  (I) were: 162 (slow com-  
bustion), 195 (explodes), 195 (burns with crackling), 108  
(decompn.), and 238°, resp., for Ba, Ag, Hg, Na, Pb(II),  
and Tl salts of  $\text{CH}_2(\text{N}_2\text{O}_2\text{H})_2$  (II): 295, 181, 195, 290, 250,  
and 208°, resp. Heights necessary to cause 50% of explo-  
sions in the falling-wt. test (2 kg.) for Pb, Hg, Ag salts of  
I were 12, 10, 10 cm., resp.; for Pb, Ba, and Na salts of II  
85, 75, and 75 cm., resp. The Ba and Na salts of I were in-  
sensitive to shock caused by the wt. falling from 100 cm.  
A. Szafrański

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1-sh (24)  
1-sh (18)

out

Distr: 4E3d

/ Absolute configuration of  $\beta$ -hydroxy- $\beta$ -phenylpropionic acid. K. Balenović, B. Urbas, and A. Deljac (Univ. Zagreb, Yugoslavia). *Croat. Chem. Acta* 31, 153-5 (1959) (in English).  $-(+)$ -PhCH(OMe)CH<sub>2</sub>CO<sub>2</sub>Me (I) was prepd. from  $-(+)$ -PhCH(OH)CO<sub>2</sub>H (II) and  $-(+)$ -PhCH(OH)CH<sub>2</sub>CO<sub>2</sub>H (III). II was converted to  $-(+)$ -PhCH(OMe)CO<sub>2</sub>H (IV) with MeI and Ag<sub>2</sub>O. IV (3 g.) heated 2 hrs. with 20 ml. SOCl<sub>2</sub> gave crude PhCH(OMe)COCl, which was dissolved in 50 ml. C<sub>6</sub>H<sub>6</sub>, dropped into a soln. of CH<sub>3</sub>N<sub>3</sub> (from 35 g. MeNHCONHNO), kept overnight at 0° and evapd. *in vacuo* to give 3.3 g. PhCH(OMe)COCHN<sub>3</sub> (V),  $[\alpha]_D^{25} -23^\circ$  (c 3.5, EtOAc). V (3.3 g.) was dissolved in 15 ml. abs. MeOH and 15 ml. MeCN, 0.3 g. CuI added at 35°, kept 3 hrs., heated 1 hr. at 50°, the mixt. filtered, poured into 100 ml. H<sub>2</sub>O, extd. with C<sub>6</sub>H<sub>6</sub>, and evapd. *in vacuo* to give 3.1 g. greenish oil which was chromatographed in C<sub>6</sub>H<sub>6</sub> on neutral Al<sub>2</sub>O<sub>3</sub> to give 2.28 g. I, b.p. 60-60°,  $[\alpha]_D^{40} 40^\circ$  (c 2.57, C<sub>6</sub>H<sub>6</sub>). III with MeI and Ag<sub>2</sub>O gave also I, b.p. 50-5°,  $[\alpha]_D^{40} 61.0^\circ$  (c 2.935, C<sub>6</sub>H<sub>6</sub>). B. Urbas (CGA)

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1-BW(BW)  
2-90g(NRX may)  
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Urbanski, T.

SCIENCE

PERIODICAL: ROCZNIKI CHEMII, Vol. 31, No. 2, 1959

URBANCKSI, T. Aliphatic nitro compounds. XXXI. Ther preparation of alcohols from primary nitroparaffins and formaldehyde. p. 695

Monthely List of East European Accessions (EEAI) LC Vol. 8, No. 4.  
April 1959, Unclass

URBANSKI, T.

Derivatives of azoxybenzene. I. Products of nitration of *p,p'*-azoxyanisole. Tadeusz Urbaniski and Jerzy Urbaniski (Politechnika, Warsaw). *Roczniki Chem.* 33, 669-80 (1959) (English summaries).—Evidence was given by Angeli (C.A. 11, 1156) that the azoxy group in aromatic compds. possesses an unsym. structure, N(O):N. The authors suggest that, denoting two aromatic rings by A and B, the ring nearest the N(O) moiety would be called the B ring. The substituents of the B ring would bear customary notions *o'*, *m'*, *p'*, or 2', 3', 4'. It is shown by nitration of *p,p'*-azoxyanisole (I) under different conditions that the B ring is less readily nitrated than the A ring. The following compds. are obtained: tetranitro deriv. of I (m. 235-40°), 4,4'-dimethoxy-3,3'-dinthro- (m. 210-12°) and -3,5,3'-trinitroazoxybenzene (m. 179-80°), *N,N'*-diacetylaminoazoxybenzene (m. 202-6°), 3,5-diacetylamino-4-hydroxyazoxybenzene (m. 230-34°), 4-acetylhydroxyazoxybenzene (m. 198-202°), 4-acetoxyanisole (m. 197-207°), and triaitro deriv. of I. II. Position isomers of unsymmetrical derivatives of 3,5,3',5'-tetranitroazoxybenzene. *Ibid.* 687-92.—The lack of symmetry of triaitroazoxybenzene, producing different mobilities of the methoxy groups, enables one to obtain a no. of pairs of position isomers of deriva. of 3,5,3',5'-tetranitroazoxybenzene (I). The following ones are obtained: 4-chloro-4'-methoxy- (m. 185-6°), 4-methoxy-4'-chloro- (m. 203-4°), 4-chloro-4'-hydroxy- (m. 198-201°), and 4-hydroxy-4'-chloro deriv. of I (m. 214-17°). Their existence can only be

explained as due to the unsym. structure of the azoxy group according to the Angeli hypothesis. The reactivity of the OMe group attached to the B ring is higher than of the group when on the A ring. III. Products of nitration of *p,p'*-azoxydimethylaniline. *Ibid.* 693-702.—Nitration of 4,4'-bis(dimethylamino)azoxybenzene with 80% HNO<sub>3</sub> gave 4,4'-bis(methylnitroamino)-3,5,3',5'-tetranitroazoxybenzene (I), m. 208-9° (decompn.). The structure of azoxy-tetrayl, analogous to that of tetrayl, the product of nitration of dimethylaniline, is postulated for I. Attempts to prove it by prepn. of I from tetranitroazoxyanisole (II) give the following products. Heating of II with HBr in AcOH yields 4,4'-dihydroxy- (III) (m. 186-7°), and chlorination of III with *p*-toluenesulfonyl chloride gives 4,4'-dichloro-3,5,3',5'-tetranitroazoxybenzene (IV) (m. 220-8°). IV with methylamine (V) in EtOH, gives 4,4'-dimethylamino (VI) (m. 200-1°) and in toluene soln. VI and 4-chloro-4'-methylamino deriv. (VII) (m. 207-8°). The formation of VII is an addnl. proof of the unsym. structure of the azoxy group. Nitration of VI gives I. A. Kryszyński

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4E2CJP

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Distr: 4E3d

Exchange reactions of halogen for halogen in some  $\alpha$ -chloro acids. Tadeusz Urbański and Przemysław Głusiński (Politechnika, Warsaw). Roczniki Chem. 33, 1031-7 (1959) (English summary).—Heating  $\alpha$ -bromo- $\beta$ -( $p$ -nitrophenyl)propionitrile (I) with 20% HCl gave  $\alpha$ -chloro- $\beta$ -( $p$ -nitrophenyl)propionic acid (II) and only hydrolysis with 48% HBr yielded  $\alpha$ -bromo- $\beta$ -( $p$ -nitrophenyl)propionic acid (III). Hydrolysis of II nitrile with HBr gave III. The same results were obtained for corresponding amides. II heated with HBr gave III and vice versa. In order to find whether the halogen atom in  $\alpha$ -nitriles can be exchanged without hydrolysis of the nitrile group I and II nitrile were heated with satd. KCl or KBr solns., resp.; 30% of Br deriv. was transformed into Cl deriv. and 17% of Cl deriv. to Br deriv. A. Kępcowski

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1- 929(dh)  
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aw

URBANSKI, T.; LANGE, J.

Preparation of derivatives of phenylsuccinic acid. I. Preparation of p-halo-phenylsuccinic acids. p. 197

ROCZNIKI CHEMII. (POLska Akademia Nauk) Warszawa, Poland, Vol. 33, no. 1, 1959.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 9, September 1959.  
Uncl.